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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of

Deployment of Wireline Service Offering
Advanced Telecommunications Capability

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) CC Docket No. 98-147
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**COMMENTS OF THE
ASSOCIATION FOR LOCAL
TELECOMMUNICATIONS SERVICES**

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**THE ASSOCIATION FOR LOCAL
TELECOMMUNICATIONS SERVICES**

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SUMMARY

“Line sharing” — the provision of DSL or other advanced telecommunications services using the same local loop on which a subscriber receives voice services — is technically feasible and clearly in the public interest. Indeed, line sharing is the key to advanced services competition in the residential market, the principal application of ADSL technology, and is a preferable approach to DSL resale discounts for addressing the unserved needs of residential and small business end users. The ILECs’ own advanced services are increasingly provisioned on loops shared with voice telecommunications services. In order to promote competitive parity and to further the availability of residential advanced services for all Americans, ALTS urges the adoption of a nationwide, federal mandate for line sharing.

The *Further Notice* correctly found that line sharing is technically feasible. Although ALTS recognizes that the “operational” and other “practical” issues identified in the *Further Notice* may be significant, these are logistical matters that can best be addressed on a negotiated basis among carriers serving mutual customers. The far more important questions raised by line sharing are the pricing of any line sharing network element and the relationship of ILEC unbundling obligations to CLECs’ continued ability to choose their own UNEs, including full loop functionalities, as desired. Whether or not the Commission implements a federal mandate for line sharing, it should not limit or revise the existing right of any CLEC to purchase a full unbundled loop and to retain exclusive use of that loop for all services it offers to its customers. Line sharing should be a right exercised by a CLEC, but not an obligation of the CLEC. Line sharing cannot be a limitation of CLEC access to all the functions and capabilities of the loop.

ALTS believes that ADSL line sharing should be mandated for ILECs under Section 251(c)(3) of the 1996 Act as a UNE for POTS. The “capability” of the loop to provide DSL-

based data services simultaneously with voice services on a single line falls squarely within the 1996 Act's definition of unbundled network elements. On the other hand, line sharing with T1 and other digitally multiplexed services is not yet feasible due to the current limitations of DSL technology. The Commission should therefore rule that with respect to any loop technology for which line sharing has been incorporated into an industry standard, implemented by any ILEC or approved by a state commission, the provision of line sharing is mandatory for all ILECs. Alternatively, the Commission could classify line sharing as an interstate special access service, required as a matter of basic ILEC non-discrimination.

As to pricing, it is clear that ILECs are improperly allocating no loop or other NTS costs to their data services provisioned over their shared loops. The interstate DSL tariffs already approved by the Commission include no loop cost and no loop cost imputation. This pricing approach incorrectly attributes all of the cost of the loop, and associated NTS costs of the local network, to the underlying voice telecommunications service, allowing the DSL service to free ride on the loop. ALTS strongly believes that, at the very least, some cost should be apportioned to the data channel — with these charges of course being the same for both CLECs and ILECs. Where line sharing is permitted or required, both ILEC and CLEC advanced services should make an (identical) appropriate contribution to loop costs, thus allowing the FCC and state commissions to reduce the amount of loop costs incorporated into local exchange prices and subscriber line charges applicable to residential end users.

Finally, the Commission should maintain the “significantly degrade” standard for spectrum compatibility established in the *Advanced Services Order*. ALTS concurs with the Commission's standards for spectrum compatibility and with application to advanced services of the settled communications law principle that the burden of proving any “harm to the network” from

the deployment of new technologies by a competitor must rest with the ILEC. And although ALTS agrees that the Commission should not endeavor to develop technical standards itself, it is vital that the Commission reassert its overriding authority to determine whether industry “consensus” standards are appropriate.

There are numerous examples of spectrum compatibility and other DSL-related standards for which the ILECs have sought to use their dominance of industry standards bodies to exclude, obstruct or delay the entry of DSL technologies preferred by CLECs and to favor their own ADSL applications. The Commission must accordingly monitor and participate in industry standards bodies (under Section 256 of the 1996 Act) to ensure that ILECs do not abuse the process to advantage their own technologies and services. The Commission should also establish a technical advisory committee, modeled on the North American Numbering Council, to review technical standards issues and recommend potential Commission rules for resolving standards-related disputes involving spectral issues associated with advanced services.

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**COMMENTS OF THE
ASSOCIATION FOR LOCAL
TELECOMMUNICATIONS SERVICES**

The Association for Local Telecommunications Service (“ALTS”), by its attorneys, hereby submits these comments on the *Further Notice of Proposed Rulemaking* in the above-captioned proceeding.¹ ALTS is the leading national trade association representing facilities-based competitive local exchange carriers (“CLECs”).

INTRODUCTION

The Commission’s goal of “creat[ing] incentives for providers of advanced services to innovate and to develop and deploy new technologies and services on a more efficient and expeditious basis”² requires that it apply to the advanced services market the same pro-competitive principles that the Commission fashioned for traditional voice telecommunications services in its

¹ *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, First Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 98-147 (rel. Mar. 31, 1999)(“*Advanced Services Order*” and “*FNPRM*” or “*Further Notice*”).

² *Id.* ¶ 4. The Commission has defined “advanced services” to mean “high speed, switched, broadband wireline telecommunications capability that enables users to originate and receive high-quality voice, data, graphics or video telecommunications using any technology,” including digital subscriber line (“xDSL”) technology. *Id.* ¶ 1 n.2; 47 C.F.R. § 51.5.

Local Competition Order three years ago.³ To this end, in the *Advanced Services Order* the Commission adopted national standards for collocation arrangements and ruled that incumbent local exchange carriers (“ILECs” or “incumbent LECs”) may not “unilaterally determine what technologies LECs, both competitive LECs and incumbent LECs, may deploy.”⁴ These decisions will significantly accelerate the deployment of advanced services networks, particularly high-speed digital subscriber line (“DSL”) services, by establishing parity between CLECs and ILECs in these crucial areas.

The *Further Notice* now seeks additional comment on appropriate long-term rules for spectrum compatibility and management, as well as on the Commission’s tentative conclusion that “line sharing” — the provision of DSL services using the same local loop on which a subscriber receives voice telecommunications services — is technically feasible and in the public interest.⁵ With the caveats discussed below, ALTS urges the adoption of a nationwide federal mandate for line sharing. Line sharing is the key to advanced services competition in residential markets, which is the principal application of asymmetric DSL (“ADSL”) technology. Indeed, line sharing is a preferable approach to DSL resale discounts for addressing the unserved needs of residential and small business end users.

The *FNPRM* correctly concludes that line sharing is technically feasible, because ILEC advanced services are today increasingly provisioned on loops shared with voice telecommunications services. Although ALTS recognizes that the “operational . . . and other practical issues”

³ *Implementation of the Local Telecommunications Provisions in the 1996 Act*, First Report and Order, 11 FCC Rcd. 15499 (1996) (“*Local Competition Order*”).

⁴ *Advanced Services Order* ¶ 63.

⁵ *Further Notice* ¶¶ 96, 98-99, 103.

identified in the *Further Notice* may be significant,⁶ these are logistical matters that can best be addressed on a negotiated basis among carriers serving mutual customers. The far more important questions raised by line sharing are the pricing of any line sharing network element and the relationship of ILEC unbundling obligations to CLECs' continued ability to choose their own unbundled network elements ("UNEs"), including full loop functionalities, as desired. Whether or not the Commission in fact implements a federal mandate for line sharing, it should not limit or revise the existing right of any CLEC to purchase a full unbundled loop and to retain exclusive use of that loop for whatever services it offers to its customers.

ALTS believes that ADSL line sharing should be mandated for ILECs under Section 251(c)(3) of the Telecommunications Act of 1996 ("1996 Act" or "Act")⁷ as a UNE for plain old telephone services ("POTS"). The "capability" of the loop to provide DSL-based data services simultaneously with voice services on a single line falls squarely within the 1996 Act's definition of a UNE. On the other hand, line sharing with T1 and other digitally multiplexed services is not yet feasible due to current limitations of DSL technology. The Commission's line sharing policies should of course be technologically neutral. Much as it has with collocation and interconnection in the *Advanced Services Order*, therefore, the Commission should rule that with respect to any technology where line sharing capability has been incorporated into the applicable industry standard, implemented by any ILEC or approved by a state commission, the provision of line sharing is mandatory for all ILECs. Alternatively, the Commission could classify line sharing as

⁶ *Further Notice* ¶ 97.

⁷ 47 U.S.C. § 251(c)(3); Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, *codified at* 47 U.S.C. §§ 151 *et seq.* ("1996 Act").

an interstate special access service, required under Sections 201(b) and 202(a) of the Communications Act as a matter of basic ILEC non-discrimination.⁸

As to pricing, it is clear that ILECs are improperly allocating no loop or other non-traffic sensitive (“NTS”) costs to their data services provisioned over their shared loops. The interstate DSL tariffs already approved by the Commission include no loop costs and no loop cost imputation. This pricing approach incorrectly attributes all of the cost of the loop to the underlying voice telecommunications service, allowing the DSL service to free ride on the loop. ALTS strongly believes that, at the very least, some cost should be apportioned to the data channel — with these charges being the same for both CLECs and ILECs. Where line sharing is permitted or required, both ILEC and CLEC advanced services should make an (identical) appropriate contribution to loop costs, thus allowing the FCC and state commissions to reduce the amount of loop costs incorporated into local exchange prices and subscriber line charges applicable to residential end users.

The Commission should maintain the “significantly degrade” standard for spectrum compatibility and management established in the *Advanced Services Order*. ALTS concurs with the Commission’s standards for spectrum compatibility and with application to advanced services of the settled communications law principle that the burden of proving any “harm to the network” from the deployment of new technologies by a competitor must rest with the ILEC. And, although ALTS agrees that the Commission should not endeavor to develop technical standards itself, it is vital that the Commission reassert its overriding authority to determine whether industry “consensus” standards are appropriate. There are numerous examples of spectrum compatibility and other DSL-related standards for which the ILECs have used their dominance of

⁸ 47 U.S.C. §§ 201(b), 202(a).

industry standards bodies to exclude, obstruct or delay the entry of DSL technologies preferred by CLECs and to favor their own ADSL applications. The Commission must accordingly monitor and participate in industry standards bodies (under the authority of Section 256 of the 1996 Act)⁹ to ensure that ILECs do not abuse the process to favor their own technologies and services. The Commission should also establish a technical advisory committee, modeled on the North American Numbering Council, to review technical standards issues and recommend potential Commission rules for resolving standards-related disputes involving spectral issues associated with advanced services.

I. LINE SHARING IS A LOOP CAPABILITY THAT MUST BE MADE AVAILABLE BY ILECs ON AN UNBUNDLED BASIS UNDER SECTION 251(c) OF THE ACT

As the *Further Notice* recognized, line sharing “makes it possible for a competing carrier to offer advanced services over the same line that a consumer uses for voice services without requiring the competing carrier to take over responsibility for providing the voice service.”¹⁰ This ability for CLECs to enter the high-speed, broadband services market independently of voice telecommunications is crucial to the Commission’s ability to foster the availability of advanced services for all Americans. Line sharing will not create disincentives for facilities deployment by data CLECs, because major DSL providers are already investing (and will continue to invest) hundreds of millions of dollars in the roll-out of their own packet switched networks for the provision of broadband, Internet-based services.¹¹ Rather, line sharing is a classic example of a

⁹ 47 U.S.C. § 256.

¹⁰ *Further Notice* ¶ 93.

¹¹ See *Further Notice* ¶ 97 (inquiring whether a line sharing mandate would decrease incentives for CLEC investment). These new DSL providers include several ALTS members.

situation in which, absent regulatory requirements for parity between ILECs and their competitors, the needs of residential consumers will remain unserved and the existing ILEC voice service monopolies will be extended into the new market for advanced broadband telecommunications services.

A. Line Sharing is Necessary to Permit CLEC DSL Providers to Compete In The Residential Advanced Services Market

The *Further Notice* correctly concludes that “there exists no *bona fide* issue of technical infeasibility” with respect to line sharing.¹² Incumbent LECs are increasingly providing DSL-based advanced services, including both their own advanced services and those of certain Internet Service Provider (“ISP”) partners, on a shared line basis.¹³ By offering DSL over the same loop used for voice services, line sharing allows end users who do not need, cannot afford or do

¹² *Further Notice* ¶ 103.

¹³ *Id.* The *Further Notice* points to the example of Pacific Bell’s relationship with Concentric Network, Inc, for the provision of line-shared DSL by an ILEC’s ISP partner. *Id.* In the time since the comment period closed in this proceeding in 1998, however, each of the Regional Bell Operating Companies, GTE and other ILECs have begun offering their own line-shared DSL services and are now also providing line-shared DSL capabilities to independent ISPs. For instance, GTE explains that:

DSL end-users can still use their existing phone line for voice communications while using DSL for Internet access simultaneously. Traditional analog voice band modems use the same frequency band, 0-4 kilohertz (KHz), as telephone service, preventing concurrent voice and data use. Because the newer DSL modems operate at frequencies above the voice channel, from 100 KHz to 1.1 Megahertz (MHz), POTS (plain old telephone service) and DSL data service [can be provided] concurrently. By using the same telephone line, there’s no need for a new telephone number to use DSL service. Moreover, DSL modems are designed so that normal telephone service will operate even if the DSL modem is unplugged or otherwise disabled.

GTE Network Services DSL Frequently Asked Questions, <http://www.gte.com/dsl/idsl/ns_faq.html>.

not have access to (*i.e.*, where there are insufficient copper loops to a residence) another dedicated line to enjoy high-speed Internet access and other advanced services.

ALTS strongly concurs with the Commission's observation that line sharing is critical to allow competitors to "offer advanced services to markets, such as the residential market, where loop costs make a stand-alone data service uneconomic."¹⁴ If only ILECs are permitted to provide DSL via line sharing, CLECs will be forced to buy a full loop UNE and will be priced out of the residential DSL market. While business customers, many of whom already purchase T1 and other high-capacity telecommunications services, can afford to purchase a data service that uses a stand-alone loop, without line sharing there will be no hope of competition for lower-volume and higher-cost markets.

Competitive DSL-based CLECs simply cannot meet the \$49.95 market price point for advanced services, typical of today's ILEC advanced DSL offerings, if they must purchase a full loop UNE in addition to all the DSL-related network capital investments (collocation, POPs, routers, high-capacity transport, Internet backbone capacity, etc.) required to enter the advanced services market. Furthermore, as the Commission noted, the equipment, expertise and technologies for providing circuit-switched voice services and packet-switched data services are completely different;¹⁵ if a DSL-based CLEC were required to make simultaneous, dual investments in parallel voice and data networks in order to provide advanced services, there is little realistic likelihood that substantial entry into the residential advanced services market would be economically feasible.

¹⁴ *Further Notice* ¶ 96.

¹⁵ *Id.* ¶ 93.

As a policy matter, line sharing is therefore entirely consistent with the mandate of Section 706 that the Commission ensure the widespread availability of advanced telecommunications services to all Americans.¹⁶ Residential markets generally lack the economic characteristics — *e.g.*, density, volume, demand elasticity, etc. — that have supported competitive entry into the business voice and data markets. This need not be a barrier to competitive provisioning of advanced services, however, because the ability of DSL services to share loop spectrum with existing voice services now permits CLECs to offer residential services that would not be possible if they could only be provided by means of a stand-alone unbundled loop. Hence, line sharing is a crucial policy component of accelerating the deployment of advanced services for residential consumers. Indeed, absent a Commission mandate for line sharing, ILECs will have *carte blanche* to extend their voice monopoly into residential high-speed data services, a development that would harm competition, consumers and the public interest.

Only one minor technical issue is even potentially raised by line sharing.¹⁷ The *Further Notice* suggests that if “conditioning” a line for DSL service (*i.e.*, removing load coils, repeaters,

¹⁶ 47 U.S.C. § 706.

¹⁷ For the reasons discussed in the *Further Notice*, technical feasibility is not a legitimate issue with line sharing. Since line sharing is being employed today by LECs using ADSL, and is incorporated into the existing Committee T1 standard for ADSL, it is plainly feasible. As U S WEST commented in 1998, the only substantial issues are OSS-implementation related, *i.e.*, “assignment, maintenance, billing and repair systems.” U S WEST Comments, CC Docket No. 98-147, at 47 & Attach. D ¶ 12. In ALTS’ view, these operational issues are all workable on an inter-carrier or industry forum basis. We agree with the *Further Notice* that a “determination of technical feasibility does not include consideration of economic, accounting, billing, space or site concerns.” *Further Notice* ¶ 97, citing 47 C.F.R. § 51.5.

The remaining technical issues raised by ILECs are associated with “the lack of spectrum and transmission power standards.” U S WEST Comments, *supra*, at ¶ 7. However, spectrum compatibility and spectrum management raise no different issues for shared loops than they do for DSL services in general. (The text discussion regarding DSL loop “conditioning” is not an example of spectral interference, but rather of loop hardware

bridged taps, etc.) would “interfere with the analog voice service of the line,” line sharing may not be technically feasible.¹⁸ ALTS does not disagree that in meeting the requirements of DSL service for the removal of old loop equipment designed to mitigate attenuation of voice signals, particularly for longer loop lengths, there may be instances in which the quality of voice services could be diminished. We believe, however, that the standard articulated in the *Further Notice* is too broad, in that it implies that *any* degradation of or interference with voice signal quality would *automatically* make line sharing technically infeasible. If a technical standard is fashioned by the Commission for this situation, the “significant degradation” standard applied by the *Advanced Services Order* to spectrum compatibility should be employed.¹⁹ The better approach, as addressed in Section I(B), is to mandate line sharing whenever that capability is incorporated into the applicable industry standard — as for ADSL today — because carriers working in standards bodies share a mutual interest in avoiding unacceptable service quality degradation.

More importantly, line sharing is not a situation in which the FCC must or should rely upon ILEC technical demonstrations to state commission as the principal criterion of technical feasibility.²⁰ Because line sharing is (by definition) a service requested by end users, consumers

requirements for DSL that may increase attenuation of the voice signal.) Thus, the spectrum interference objections to line sharing do not present any independent ground for finding that loop sharing is technically infeasible. The Commission’s determinations in the *Advanced Services Order* proceeding on spectrum compatibility standards apply to shared loops as well as “conditioned” DSL-capable loops purchased on an unbundled, stand-alone basis.

¹⁸ *Further Notice* ¶ 104.

¹⁹ As in the discussion of spectrum compatibility below in Section II, ALTS suggests a “customer perception” test for technical feasibility, allowing (but not requiring) an end user to terminate or refuse line-shared advanced services if there is a significant, perceptible degradation of voice service.

²⁰ *Further Notice* ¶ 104 (proposing that if “an incumbent LEC can demonstrate to the state commission that digital loop conditioning would interfere with the analog service of the

themselves have a very strong incentive to ensure that there is no unacceptable quality decrease in their voice service associated with DSL line sharing. The choice and responsibility for “policing” service quality in a line sharing environment should be with the customer, not the ILEC, in order to maximize consumer choice.²¹ There will probably be many end users willing to suffer voice service quality impairments marginally (or even far) higher than an ILEC would prefer in order to gain the benefit of being able to subscribe to an advanced DSL service on the same loop. Instead of resolving potential service quality issues associated with line sharing at a regulatory level, or by delegating them to state arbitrations, the Commission should support consumer choice and allow end users themselves to make the ultimate determination whether shared DSL service outweighs any loss of voice signal quality or vice-versa.

Permitting ILECs to contest line sharing, on a line-by-line basis, would only provoke an explosion of state commission litigation as ILECs sought to use yet another procedural gamut to delay the entry of competitors into their local markets. Indeed, given the resource imbalance between CLECs and incumbents, allowing ILECs to challenge line sharing on a line-specific basis — under any technical standard — is a recipe for disaster. Competitive LECs have already witnessed more than their share of ILEC technical stratagems directed against competing voice services, and have no desire to repeat such a scenario in the burgeoning market for advanced services.²²

line, line sharing is not technically feasible on that particular line, and the incumbent is not obligated to share that line”).

²¹ *Further Notice* ¶ 96.

²² See ALTS Comments, CC Docket No. 96-98, at 18 (May 26, 1999) (“ALTS UNE Remand Comments”) (“Three years of experience in implementing the 1996 Act have shown that establishing an environment conducive to efficient competitive entry requires action designed to prevent ILEC attempts at gaming the Commission’s rules.”)

B. Line Sharing Squarely Meets the Section 251(c) Standard for Unbundling

The *Further Notice* tentatively concludes²³ that the Commission has “authority to require line sharing” under its Section 251 and Section 252 jurisdiction to implement local competition, as affirmed by the Supreme Court in *Iowa Utilities*.²⁴ Although the Commission did not specifically identify the basis for this power, ALTS agrees that the line sharing functionality of local loops is appropriately considered a UNE, subject to the Commission’s settled power to fashion federal rules applicable to all ILECs nationwide.

Section 153(45) of the 1996 Act includes the “capabilities . . . provided by means of” facilities in the definition of network elements subject to Section 251(c) unbundling.²⁵ Line sharing is a “capability” of the local loop, and is thus a network element under the plain language of the 1996 Act. As to the “necessary” and “impair” standards, because the inability to provide DSL service over the same loop used for local exchange services makes competitive DSL services not just hypothetically or marginally more expensive, but simply impossible, line sharing clearly meets the unbundling test of Section 252(d)(2) of the 1996 Act.²⁶

First, just as the loop itself remains a bottleneck monopoly facility available only from an ILEC, so too is sharing of data and voice service over a single loop available only from an

²³ *Further Notice* ¶ 98.

²⁴ *AT&T Corp. v. Iowa Utils. Bd.*, 119 S. Ct. 721 (1999).

²⁵ Section 153(45) defines “network element” as a “facility or equipment used in the provision of a telecommunications service,” and specifically “includes features, functions, and capabilities that are provided by means of such facility or equipment.” 47 U.S.C. § 153(45). Similarly, Section 51.5 of the Commission’s Rules includes the “features, functions, and capabilities that are provided by means of [loop] facilities” in the definition of “network element.” 47 C.F.R. § 51.5.

²⁶ In the *UNE Remand* proceeding, ALTS has proposed that the Commission utilize as its standard for “impair” under Section 252(d)(2) that a network element must be unbundled “until the time at which a fully competitive wholesale market develops for the particular network element.” ALTS UNE Remand Comments at 12.

ILEC.²⁷ Second, this is not a case in which unbundling is justified by “any increase in cost (or decrease in quality) imposed by denial of a network element.”²⁸ The economic reality is that in the absence of line sharing, the cost of a stand-alone unbundled loop (e.g., \$22.00 per month) will need to be recovered from a CLEC’s DSL prices. Maintaining a price competitive with ILEC DSL services would therefore require CLECs to lose money, since the market price would exceed their direct costs (loop, DSLAM, collocation, transport, etc.).

In short, denial of line sharing “would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer” under Section 251(d)(2)(B) because it would be economically impossible for a competitive DSL provider to offer high-speed data services, at current market prices, at a profit. Hence, this is not a situation in which “the business receives a handsome profit but is denied an even handsomer one,”²⁹ but instead the inability to realize a profit in the first place. Under whatever legal standard the Commission adopts for UNEs on remand from *Iowa Utilities*, therefore, line sharing more than amply meets the “impair” standard.

Line sharing is also “necessary” because, to the extent ILECs provide for line sharing via proprietary DSLAM or DSL “splitter” equipment, use of this equipment is required for the provision by a CLEC of DSL services on a shared line basis. It is important to recognize that DSLAM/splitter technology is vendor-provided and that the techniques for splitting voice from data frequencies may vary according to the vendor selected by the ILEC. On the other hand, a

²⁷ CLECs can and do offer DSL service using line sharing, but there is no question that CLECs today lack the scale, ubiquity and market penetration to provide a ubiquitous alternative to ILEC local networks. See Section I(C) below.

²⁸ *Iowa Utilities*, 119 S. Ct. at 735.

²⁹ *Id.* at 735 n.11.

CLEC does not gain access to any proprietary ILEC information just by having its data split off from POTS voice traffic.³⁰ Thus, although ALTS does not believe that the “necessary” standard, applicable only to proprietary ILEC network elements, properly applies to line sharing, that standard is plainly satisfied.³¹

To avoid problems with service quality arising from potentially incompatible equipment and DSL technologies, line sharing should be required whenever the applicable industry standards include the capability for shared provision of voice/data on single loop.³² Today, that is limited to ADSL service shared with POTS, as the other “flavors” of xDSL technology either do not support simultaneous transmission of both voice and data signals at different frequencies on a single loop or have not yet completed the industry standards development process, and line

³⁰ A network element is “proprietary in nature” only if use of or access to that element “necessarily reveals incumbent-specific methods or processes covered by intellectual property rights and protections, including those available under copyright, patent and trademark law.” ALTS UNE Remand Comments at i, 15-18.

³¹ In state arbitrations, some ILECs have argued that line sharing would amount to sub-loop unbundling and that the Commission’s *Local Competition Order* affirmatively precludes line sharing. Neither of these conclusions is valid. Sub-loop unbundling is the division of the loop into separate components (*e.g.*, feeder and distribution plant) and CLEC interconnection with only a portion of the physical plant. In line sharing, a CLEC would interconnect with the entire loop, but only transmit at certain frequencies over that physical plant. Additionally, Paragraph 385 of the *Local Competition Order*, which served as the basis for Section 51.309(d) of the Commission’s Rules, explains that CLECs are “entitled” to use of an entire loop UNE and cannot be forced to accept only a portion of the spectrum supported by that loop. The *Local Competition Order*, however, did not address line sharing and did not preclude a CLEC from accepting less than a “full” loop where all the CLEC needs is the loop’s line sharing functionality for transmission of data. *See* Section I(C) below.

³² ALTS agrees that the Commission should not promulgate a rule for line sharing that is limited to a specific DSL technology or define the loop UNE (or line sharing UNE) in terms of specific loop frequency criteria. Doing so would paralyze technical innovation — as well as enhancing the ILEC incentives for standards body abuse discussed below in Section II — by “arbitrarily free[ing] technological development and deny[ing] carriers opportunities to use the loop to provision services that rely on different frequency bands within the loop.” *Further Notice* ¶ 100.

sharing with T1 and other digitally multiplexed services is not yet feasible due to current technical limitations of DSL technology.³³ ALTS proposes that the Commission apply to line sharing a rule analogous to that which the *Advanced Services Order* applies to spectrum compatibility. Where line sharing has been incorporated into an industry standard, implemented by any ILEC or approved by a state commission, the provision of line sharing should be mandatory for all ILECs.³⁴ In this way, the Commission can support line sharing with rules that are “forward-looking and flexible enough to stimulate, rather than stifle, technological development.”³⁵

An alternative approach to a line sharing UNE is to classify this capability as an interstate special access service. Since the Commission has already ruled that DSL is an interstate telecommunications service,³⁶ it could hold that ILECs must provide line sharing to data CLECs under the non-discrimination standards of Section 201(a) and 202(b) of the Act where ILECs provide their own DSL services — either directly or through ISP partners — on a shared loop basis. The Commission clearly has the power under the Act to compel the provision of an interstate access service by ILECs when such a service is in the public interest.³⁷ And as the *Local Competition Order* held, nondiscrimination under the Act means both equal treatment among CLECs and equality between the facilities and services ILECs make available for their own

³³ All xDSL technologies (except ISDN-rate DSL or “iDSL”) require end-to-end copper connectivity, and thus are incompatible with digitally multiplexed services and with non-copper loop facilities such as fiber and digital loop carrier (“DLC”) systems.

³⁴ See *Advanced Services Order* ¶¶ 61-70.

³⁵ *Further Notice* ¶ 101.

³⁶ *GTE Telephone Operating Companies*, Memorandum Opinion and Order, CC Docket No. 98-79, FCC 98-292 (rel. Oct. 30, 1998), *recon. denied*, FCC 99-41 (rel. Feb. 26, 1999).

³⁷ For instance, the Commission has ordered ILECs to provide 800 database access for toll-free services and Feature Group D “equal access” for IXC. See, e.g., *800 Database Access Tariffs and the 800 Service Management System Tariff*, CC Docket No. 93-129, Report and Order, 11 FCC Rcd. 15227 (1996).

services and those provided to competitors.³⁸ In contrast to the line sharing UNE, however, pricing for such a line sharing special access service would be decided under the Commission's price cap rules for Tier 1 ILECs, rather than by states as a matter of interconnection agreement arbitrations.

C. Line Sharing Does Not Permit ILECs to Restrict CLECs' "Exclusive Use" of Loop UNEs

ALTS is gratified that the *Further Notice* defines the line sharing issue as whether "competitive LECs should *have the right* to run high frequency signals, or other advanced services, over the same line as the incumbent LEC's voice signal."³⁹ It is absolutely vital that the Commission refrain from taking any action which, even inadvertently, undermines the ability of CLECs to purchase and use a full unbundled loop — including both the voice and data channels — where that is their business strategy. Line sharing should be a right exercised by a CLEC, but not an obligation of the CLEC. Line sharing cannot be a limitation of CLEC access to all the functions and capabilities of the loop.

This should not be a difficult or contentious proposition. The Commission has previously addressed CLECs' right to use an unbundled loop in whatever fashion they want in the *Local Competition Order*. There, the Commission concluded that a CLEC purchasing a loop UNE has the right to "exclusive" use of the loop.⁴⁰ That conclusion is unaffected by *Iowa Utilities* and should not be reconsidered. Indeed, the Commission should expressly reaffirm in the line sharing context two of its often overlooked unbundling rules: (1) Section 51.307(c), providing that a CLEC can have access to any one UNE "separate from access to the facility or functionality of

³⁸ *Local Competition Order* ¶¶ 312-14.

³⁹ *Further Notice* ¶ 92 (emphasis supplied).

⁴⁰ *Local Competition Order* ¶ 385.

other network elements;” and (2) Section 51.309(d), providing that a CLEC “is entitled to exclusive use” of every UNE, including the loop.⁴¹

While data CLECs should have the right, where they choose, to share their advanced services on a single loop with the incumbent LEC, that same arrangement is hardly suitable for all CLECs. In order to maintain the development of local competition, particularly for voice services, it is imperative that CLECs retain the right to get a whole loop UNE. Under any line sharing policies or rules promulgated in this proceeding, ILECs cannot be allowed to force CLECs to take just the “voice frequencies” and then put the incumbent’s own (or someone else’s) DSL over that same loop. It is that situation, in which an incumbent LEC appropriates for itself a commercially valuable portion of a UNE and denies CLEC access to that functionality when unbundling the loop, which would create the very disincentives for facilities-based investments that the *Further Notice* suggests.⁴² If a CLEC can be forced to accept a “virtual” loop in lieu of an entire loop UNE, there would be little reason for CLECs to make the major capital investments needed to enter the local telecommunications marketplace.

Likewise, as is plain from the *Further Notice*’s description, line sharing obligations do not apply to CLECs. Competitive LECs as a matter of law are not subject to the unbundling requirements of Section 251(c) of the 1996 Act. Moreover, CLECs are classified as non-dominant carriers without market power, subject to the Commission’s *Competitive Carrier* forbearance policies.⁴³ Consequently, line sharing by CLECs should remain a matter for business

⁴¹ 47 C.F.R. §§ 51.307(d), 309(c).

⁴² *Further Notice* ¶ 97.

⁴³ *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities and Authorizations Therefor*, Second Report and Order, 91 F.C.C.2d 59 (1982); see 85 F.C.C.2d 1 (1980)(First Report and Order); 84 F.C.C.2d 445 (1981)(Further Notice of Proposed Rulemaking); 93 F.C.C.2d 54 (1983)(Reconsideration); 48 Fed. Reg.

negotiations and voluntary partnerships with DSL providers. That is, CLECs buying loop UNEs retain complete freedom to use the loop for voice, data or any combination of services their customers desire. Some CLECs will likely choose to offer shared loop DSL, others may provide DSL to business customer using stand-alone loops, and some will likely enter into joint ventures with DSL carriers for offering "private label" DSL services on a line sharing basis. All of these options are available in the marketplace, which should remain the ultimate arbiter of whether, and to what extent, CLECs make line sharing available on their own facilities and the loop UNEs they purchase from incumbents.⁴⁴

D. The Commission Should Address Improper Loop Cost Allocations By ILECs and Assign a Reasonable Proportion of Loop Costs to Both ILEC and CLEC Line-Shared DSL Services

In its tariffing decisions on the interstate DSL services offered by GTE and other ILECs,⁴⁵ the Commission has approved (over the objections of many CLECs) DSL prices that are based on the assumption that no loop costs are involved in the provision of DSL on a shared

46,791 (1983)(Third Report and Order); 95 F.C.C.2d 554 (1983)(Fourth Report and Order), *vacated sub nom. American Tel. & Tel Co. v. FCC*, 978 F.2d 727 (D.C. Cir. 1992), *cert. denied*, 509 U.S. 913 (1993); 98 F.C.C.2d 1191 (1984)(Fifth Report and Order); 57 Radio Reg. (P&F) 1391 (1985)(Sixth Report and Order), *rev'd in part on other grounds sub nom. MCI Telecommunications Corp. v. FCC*, 765 F.2d 1188 (D.C. Cir. 1985).

⁴⁴ This conclusion is consistent with the *Further Notice*'s tentative finding that line sharing promotes consumer choice, since customers of a CLEC that does not offer line sharing can easily switch to the ILEC, or any other carrier that offers line sharing, in order to obtain that service. If and when CLECs obtain any significant market power in local services, the answer may be different, but that day remains only a hypothetical future possibility.

⁴⁵ *GTE Telephone Operating Companies*, Memorandum Opinion and Order, CC Docket No. 98-79, FCC 98-292 (rel. Oct. 30, 1998), *recon. denied*, FCC 99-41 (rel. Feb. 26, 1999).

line basis. This pricing structure is improper. Incumbent LEC allocation of no costs to the loop (*i.e.*, using a loop cost of \$0) in pricing their interstate DSL services is appropriate only if one assumes that loops are free. But loops are not free, as the long Commission history of access charges illustrates. So long as voice services and loop UNEs bear some cost recovery obligations for non-traffic sensitive (“NTS”) loop costs, DSL services — whether offered by ILEC or data CLEC — should not get a free ride.⁴⁶ Where line sharing is permitted or required, both ILEC and CLEC advanced services should make an (identical) appropriate contribution to loop and other NTS costs, thus allowing the FCC and state commissions to reduce the amount of loop costs incorporated into local exchange prices and subscriber line charges applicable to residential end users.

The *Further Notice* asks “what cost allocation issues, if any, are raised by line sharing.”⁴⁷ ALTS believes that line-shared DSL services must make a contribution to loop costs. Nonetheless, it is important to stress that in achieving this objective, ILECs are not permitted merely to increase line sharing charges for CLECs or to unilaterally impose their own view of proper loop cost allocations. Loop cost recovery obligations must be the same for both ILEC and CLEC line-shared DSL services. Nondiscriminatory pricing requires, at the very least, imputation by ILECs of the same loop costs charged CLECs into their interstate DSL rates. Thus, once it has

⁴⁶ Regardless of the loop cost allocation for line-shared advanced services, the costs associated with cross-connects (*e.g.*, from the DSL splitter to the CLEC DSLAM) and for OSS are recovered separately in the TELRIC price of the line sharing UNE.

⁴⁷ *Further Notice* ¶ 106. With respect to the *Further Notice*’s inquiry whether line sharing would affect “federal and state access charge regimes and universal service mechanisms,” there do not appear to be any adverse effects whatsoever. Universal service obligations are generally calculated today based on a carriers’ total telecommunications revenues. Likewise, although access charges are determined net of subscriber line charges, a line sharing loop cost allocation would decrease LECs’ access charge revenue requirement, thereby permitting a decrease in the SLC imposed directly on end users.

decided upon the proper loop cost allocation for line sharing, the Commission should require that all ILECs adjust their tariffed interstate DSL prices accordingly.

Allocation of some proportion of loop costs to the "data channel" of shared line services is plainly in the public interest. First, so long as voice services and full loop UNEs bear some NTS cost recovery obligations, so too should data services, including those provisioned via line sharing. Otherwise, carriers' choices of network deployment strategies would be dictated by regulatory pricing anomalies rather than the economic merits of alternative technologies. Second, allocation of some portion of loop costs to line-shared advanced telecommunications services would permit (indeed may require) adjustment of local exchange rates, as local rates would over-recover their costs once DSL makes a contribution to NTS loops costs. Thus, an allocation of loop costs to the line sharing UNE would translate into lower telephone rates for residential subscribers. Just as line sharing itself benefits residential and low-volume end users by encouraging competitive entry, so too would a loop cost allocation benefit residential end users by bringing local exchange rates down.

Although a loop cost allocation for line sharing is imperative, the Commission should not hold up line sharing for a decision on these pricing issues. Instead, it should examine loop allocation in the context of ILEC interstate DSL tariffs. Any loop cost assignment calculated on re-examination of the ILEC DSL rates should be the same price ILECs are required to charge CLECs for line sharing. Although ALTS is not prepared to offer a specific cost allocation methodology proposal at this time, we note that pricing for line sharing, as for other UNEs, should be based on the same national TELRIC standards that the Commission developed in the *Local Competition Order*. Indeed, the Commission should mandate line sharing on a national basis

even though, like other UNEs, specific pricing determinations are reserved for state commissions.

II. THE COMMISSION SHOULD MAINTAIN THE “SIGNIFICANTLY DEGRADE” STANDARD FOR SPECTRUM COMPATIBILITY AND ACTIVELY OVERSEE THE INDUSTRY STANDARDS PROCESS

The Commission should maintain the “significantly degrade” standard for spectrum compatibility established in the *Advanced Services Order*.⁴⁸ ALTS concurs with the Commission’s standards for spectrum compatibility and with application to advanced services of the settled communications law principle that the burden of proving any “harm to the network” from the deployment of new technologies by a competitor must rest with the ILEC. And although ALTS agrees that the Commission should not endeavor to develop technical standards itself,⁴⁹ it is vital that the Commission reassert its ultimate authority to determine whether industry “consensus” standards are appropriate.

The *Further Notice* emphasizes that the Commission’s rules on spectrum compatibility and spectrum management “rest upon currently established technical standards and practices,”

⁴⁸ *Advanced Services Order* ¶¶ 66-67. Under the “significantly degrade” test, an advanced service technology can be deployed unless an ILEC demonstrates that it will substantially degrade existing services. ALTS emphasizes that this test should be a practical, real-world standard, not an exercise in mathematical calculations by telecommunications engineers. See *Further Notice* ¶ 89 (seeking comment on how to define “significantly degrade” standard). In other words, the test should be whether DSL or any other technology would cause a significant degradation from the perspective of an end user. Only service impairments that are perceptible to, and unacceptable from the position of, an end user should be material to determinations on spectrum compatibility and spectrum management. Of course, it goes without saying that this is true for the customers of all carriers, including CLECs, ILECs and data CLECs. Where deployment of a technology would substantially degrade the services of any carrier, spectrum compatibility rules should be developed.

⁴⁹ *Id.* ¶ 67.

but are not a substitute for “long term, more comprehensive technical standards and practices.”⁵⁰ The *FNPRM* also recognizes, however, that “the Commission can play a role in fostering timely, fair, and open development of standards for current and future technologies.”⁵¹ ALTS strongly supports this conclusion. Indeed, the Commission’s active involvement in and oversight of the standards development process is perhaps the most important factor in ensuring that industry standards bodies are not dominated by ILECs and used as an anticompetitive weapon to retard the technological innovation and deployment of new advanced services that the *Advanced Services Order* is designed to encourage.

The Commission has asked a number of technically complex questions, such as the proper calculation of power spectral density masks and the deployment of specific DSL technologies in binder groups, that ALTS believes are best addressed by individual DSL providers and equipment vendors. On the other hand, the *Further Notice* seeks comment on several procedural and policy issues that are central to maintaining the open, balanced standards development process envisioned by the Commission. ALTS concurs with the Commission’s tentative conclusion that Committee T1E1.4 is the appropriate industry standards forum to consider spectrum compatibility and spectrum management issues in the first instance.⁵² We also agree, however, that T1E1.4 is not balanced, as it is “overly represented by incumbent carriers and large manufacturers.”⁵³ This is a common problem in the telecommunications industry, as small CLECs and new entrants rarely have the personnel and financial resources to actively participate in all of the many standards activities affecting their businesses.

⁵⁰ *Further Notice* ¶ 78.

⁵¹ *Id.* ¶ 80.

⁵² *Further Notice* ¶ 85.

⁵³ *Id.* ¶ 81.

The Commission could respond to this problem by promulgating rules directly modifying the membership requirements of T1E1.4 and other standards bodies or by requiring larger members to pay the costs associated with participation by smaller vendors and carriers. Neither of these approaches is advisable (even if within the Commission's jurisdiction), as the FCC admittedly lacks the experience to serve as a substitute for the American National Standards Institute and other standards-sanctioning organizations. On the other hand, the Commission plainly has the ultimate authority — which it exercised, for instance, in the initial Part 68 proceedings decades ago — to determine whether the standards actually adopted by a voluntary industry standards body are consistent with the Communications Act and the public interest. The Commission, not industry standards bodies, retains the ultimate power to determine which DSL technologies can be deployed, the circumstances under which different services must be modified to avoid harmful interference, and the procedures used by carriers to manage spectrum issues in binder groups. The final Order in this proceeding can make a useful contribution to the fairness of standards development merely by reiterating these conclusions, which should be obvious but which are frequently overlooked by parties attempting to use standards development as a competitive tool.

Indeed, there are numerous examples of spectrum compatibility and other DSL-related standards for which the ILECs have sought to use their dominance of industry standards bodies to exclude, obstruct or delay the entry of DSL technologies preferred by CLECs and to favor their own ADSL applications. The Commission must accordingly monitor and “participate” in industry standards bodies (under Section 256 of the 1996 Act)⁵⁴ to ensure that ILECs do not

⁵⁴ Section 256 of the Act, 47 U.S.C. § 256, authorizes the Commission to participate in voluntary industry standards-developing organizations on issues associated with telecommunications network interconnection.

abuse the process to advantage their own technologies and services. The Commission should also establish a technical advisory committee, modeled on the North American Numbering Council ("NANC"), to review technical standards issues and recommend potential Commission rules for resolving standards-related disputes involving spectral issues associated with advanced services. Unlike the Number Portability Administration Centers ("NPACs") established to implement local number portability,⁵⁵ such an advisory group would have the power to develop dispute resolution procedures and "screen" standards issues, providing the Commission with an expert body on which to rely in making its determinations.

As is clear from this discussion, ALTS is convinced that Commission delegation of spectrum compatibility and spectrum management to any voluntary industry body, without the active participation and oversight of the FCC, will only provide additional opportunities for abuse of the standards process by ILECs and their allies in ways that harm competition and deny consumer choice. For instance, the *Further Notice* inquires whether AMI T1 technologies should be grandfathered or sunset.⁵⁶ Although "carriers have a substantial base of AMI T1 in deployment,"⁵⁷ that is precisely the problem. It is widely recognized that of all frequency-based transmission technologies, AMI T1 is the *most* spectrally interfering. Nonetheless, because of their substantial investment in this technology — which DSL makes virtually obsolete and substantially over-priced — ILECs have uniformly resisted taking AMI T1 out of service or agreeing to technical standards that limit their freedom to deploy AMI T1 services.

⁵⁵ See *Further Notice* ¶ 89.

⁵⁶ *Further Notice* ¶ 87.

⁵⁷ *Id.*

The only solution here is for the Commission to act boldly and decisively. In the interest of technological development and advanced service innovation, the Commission should not grandfather but rather set a firm subset date for AMI T1 deployment, within a time frame of three years. It should then task whatever NANC-type advisory it selects as the forum for resolution of spectrum compatibility issues to recommend timelines, procedures and standards to govern the substitution of new technologies for installed AMI T1 services. In this way, the Commission can set the overarching policies applicable to telecommunications standards development and deter anticompetitive use of the ILECs' overwhelming advantages in standards forums, without engaging in the detailed and troublesome option of promulgating Commission-designed technical standards in the rapidly changing environment of DSL and other advanced telecommunications services.

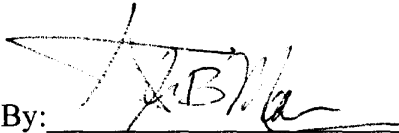
CONCLUSION

For all the foregoing reasons, the Commission should (1) mandate line sharing as a UNE at the federal level, (2) initiate a proceeding to examine the allocation of loop costs to DSL and other advanced services provisioned on a shared loop basis, and (3) establish a technical advisory panel, modeled after the NANC, to assist the Commission in exercising its ultimate authority to

ensure the establishment of technologically and competitively neutral standards for spectrum compatibility and management.

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Dated: June 15, 1999

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